APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

RPWs Rolling Hills Creek, Thunder Hills Creek, Unnamed Tributary to Thunder Hills Creek, a roadside ditch and their abutting Wetlands 2.81R, 2.9L, 3.0R, and 4.2R; significant nexus Wetlands 2.6R, 2.7R, 2.81L, and 2.82R

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): 18 December 2007**.**

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Seattle District, WA St Dept of Transportation NWS-2007-1788-SOD.
Name of water being evaluated on this JD form: Rolling Hills Creek, Thunder Hills Creek, Unnamed tributary to Thunder Hills Creek, Wetlands 2.6R, Wetland 2.7R, Wetland 2.81R, Wetland 2.81L, Wetland 2.81L, Wetland 2.82R, Wetland 2.9L, Wetland 3.0R, and Wetland 4.2R

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: Washington County: King City: Renton
Center coordinates of site (lat/long in degree decimal format): Lat: 47.4681 **N**, Long: 122.2075 **W**
Universal Transverse Mercator: .
Name of nearest waterbody: Cedar River, Rolling Hills Creek, Unnamed tributary to Rolling Hills Creek, Thunder Hills Creek, and Unnamed tributary to Thunder Hills Creek.
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Duwamish and Cedar River.
Name of watershed or Hydrologic Unit Code (HUC): 171100130399/171101120106.
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc.) are associated with this action and are recorded on a different JD form. List other JDs: _____

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☐ Office (Desk) Determination. Date: _____.
☒ Field Determination. Date(s): 24 January 2007 and 2 July 2007.

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "*navigable waters of the U.S.*" within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: _____.

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☒ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☒ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: 2,400 linear feet 7 width (ft) and/or _____ acres.
      Wetlands: 1.99 acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual.** and **Established by OHWM.**
      Elevation of established OHWM (if known): _____.

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: _____.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs
If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**
   Identify TNW: _____.
   Summarize rationale supporting determination: _____.

2. **Wetland adjacent to TNW**
   Summarize rationale supporting conclusion that wetland is "adjacent": _____.

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both.

If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

   (i) General Area Conditions:
   Watershed size: _____ **Pick List**
   Drainage area: _____ **Pick List**
   Average annual rainfall: 40 inches
   Average annual snowfall: _____ inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☒ Tributary flows through **2** tributaries before entering TNW.

   Project waters are **2-5** river miles from TNW.
   Project waters are **Pick List** river miles from RPW.
   Project waters are **1-2** aerial (straight) miles from TNW.
   Project waters are **Pick List** aerial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain: _____.

   Identify flow route to TNW[5]: Rolling Hills Creek and an unnamed tributary to Thunder Hills Creek are both tributaries to Thunder Hills Creek, which flows into Springbrook Creek, which is tributary to the Green River, a tributary to the Duwamish River, a navigable water of the U.S., used for interstate and foreign commerce. Wetland 4.2R abuts a roadside ditch that flows for more than 3 months out of the year (a RPW) and discharges via the stormwater drainage system to the Cedar River, a navigable water of the U.S.
   Tributary stream order, if known: _____.

[3] Supporting documentation is presented in Section III.F.
[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):

Tributary is: ☐ Natural
☐ Artificial (man-made). Explain: _____.
☒ Manipulated (man-altered). Explain: All three streams have been channelized in locations and flow through culverts or concrete-lined channels. The roadside ditch and culvert is a constructed feature that collects groundwater seepage and roadside runoff.

Tributary properties with respect to top of bank (estimate):
Average width: 4 to 10 feet
Average depth: 0.5 to 1.0 feet
Average side slopes: **2:1.**

Primary tributary substrate composition (check all that apply):

☒ Silts	☒ Sands	☒ Concrete
☐ Cobbles	☒ Gravel	☐ Muck
☐ Bedrock	☐ Vegetation. Type/% cover: _____	

☐ Other. Explain: Thunder Hills Creek flows through a concrete-lined channel, the unnamed tributary to Thunder Hills Creek drops down across sandstone at a very steep gradient, and Rolling Hills Creek flows through a more-natural channel before entering a 1000-ft+ culvert that discharges into Thunder Hills Creek.

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Thunder Hills Creek and its unnamed tributary have sloughing banks in the ravine upstream of Interstate 405 (I-405).
Presence of run/riffle/pool complexes. Explain: no pools are present.
Tributary geometry: **Relatively straight**
Tributary gradient (approximate average slope): 3 to 45 %

(c) Flow:
Tributary provides for: **Pick List**
Estimate average number of flow events in review area/year: **20 (or greater)**
Describe flow regime: all three tributaries flow year round; the roadside ditch flows for more than three months out of the year.
Other information on duration and volume: flow in the streams was present during 2 July 2007 site visit.

Surface flow is: **Confined**. Characteristics: _____.

Subsurface flow: **Pick List**. Explain findings: _____.
☐ Dye (or other) test performed: _____.

Tributary has (check all that apply):
☒ Bed and banks
☒ OHWM[6] (check all indicators that apply):

☐ clear, natural line impressed on the bank	☒ the presence of litter and debris
☒ changes in the character of soil	☐ destruction of terrestrial vegetation
☐ shelving	☐ the presence of wrack line
☐ vegetation matted down, bent, or absent	☐ sediment sorting
☐ leaf litter disturbed or washed away	☐ scour
☒ sediment deposition	☐ multiple observed or predicted flow events
☐ water staining	☐ abrupt change in plant community
☐ other (list): _____	

☐ Discontinuous OHWM.[7] Explain: _____.

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☐ High Tide Line indicated by:	☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;
☐ physical markings/characteristics	☐ vegetation lines/changes in vegetation types.
☐ tidal gauges	
☐ other (list):	

(iii) Chemical Characteristics:

[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7]Ibid.

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: Water appeared clear during site visits, but during storm events is most likely turbid due to erosion .
Identify specific pollutants, if known: _____.

(iv) Biological Characteristics. Channel supports (check all that apply):

☒ Riparian corridor. Characteristics (type, average width): Upstream of I-405 the channels have riparian cover with trees and shrubs. Downstream of I-405, Thunder Hills Creek flows in a concrete flume with some overhanging vegetation .

☒ Wetland fringe. Characteristics: Wetlands 2.81R, 2.9L, and 3.0R each abut one of the three streams; Wetland 4.2R abuts the ditch.

☐ Habitat for:

☐ Federally Listed species. Explain findings: _____.

☐ Fish/spawn areas. Explain findings: _____.

☐ Other environmentally-sensitive species. Explain findings: _____.

☐ Aquatic/wildlife diversity. Explain findings: _____.

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: 1.99 acres

Wetland type. Explain: _____.

Wetland quality. Explain: _____.

Project wetlands cross or serve as state boundaries. Explain: _____.

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain: _____.

Surface flow is**: Confined**

Characteristics: _____.

Subsurface flow: **Pick List**. Explain findings: _____.

☐ Dye (or other) test performed: _____.

(c) Wetland Adjacency Determination with Non-TNW:

☒ Directly abutting Wetlands 2.81R, 3.0R, 2.9L, 4.2R (no significant nexus determination required because all abut a RPW)

☒ Not directly abutting Wetlands 2.6R, 2.82R, 2.7R, 2.81L

☒ Discrete wetland hydrologic connection. Explain: I-405 has fragmented the wetlands from the streams. Rolling Hills Creek most likely flowed through Wetlands 2.6R and 2.7R historically before being culverted over 1000 ft+ to Thunder Hills Creek. The wetlands are now connected via culvert (also form headwaters) to an unnamed tributary to Rolling Hills Creek. Wetlands 2.81L and 2.82R most likely would have been contiguous with Wetland 2.9L and Thunder Hills Creek prior to I-405 and State Route 515. Now Wetlands 2.81L and 2.82R connect via culvert to Thunder Hills Creek. .

☐ Ecological connection. Explain: _____.

☐ Separated by berm/barrier. Explain: _____.

(d) Proximity (Relationship) to TNW

Project wetlands are **2-5** river miles from TNW.

Project waters are **1-2** aerial (straight) miles from TNW.

Flow is from: **Wetland to navigable waters.**

Estimate approximate location of wetland as within the **500-year or greater** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Water is clear in Wetlands 2.6R, 2.7R, 2.81R, 2.81L, 2.9L, 3.0R, and 4.2R. Wetland 2.82R is brown due to tannins.

Identify specific pollutants, if known: All the wetlands receive stormwater runoff that most likely contains hydrocarbons, heavy metals, and other vehicle generated pollutants.

(iii) Biological Characteristics. Wetland supports (check all that apply):

☒ Riparian buffer. Characteristics (type, average width): minimal buffer is provided and only on the side opposite the highways.

☒ Vegetation type/percent cover. Explain: most of the vegetation is Himalayan blackberry with scattered black cottonwoods and red alders.

☐ Habitat for:

☐ Federally Listed species. Explain findings: _____.

☐ Fish/spawn areas. Explain findings: _____.

☐ Other environmentally-sensitive species. Explain findings: _____.

☐ Aquatic/wildlife diversity. Explain findings: _____.

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: 7

Approximately (1.97) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)		Size (in acres)	Directly abuts? (Y/N)		Size (in acres)
Wetland 2.6R	N	0.15	Wetland 2.7R	N	0.25
Wetland 2.81R	Y	0.07	Wetland 2.81L	N	0.03
Wetland 2.82R	N	0.38	Wetland 2.9L	Y	1.05
Wetland 3.0R	Y	0.04			

Summarize overall biological, chemical and physical functions being performed: These wetlands provide flood flow attenuation, water quality improvement, baseflow support, production and export of organic matter, and minimal habitat for small urban mammals.

C. SIGNIFICANT NEXUS DETERMINATION

1. Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: _____.

2. Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: _____.

3. Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: Wetlands 2.6R, 2.7R, 2 .81L, and 2.82R all attenuate flood flows, improve water quality, and provide base flow support and organic matter input to the RPWs in the project area,.

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area:

☐ TNWs: _____ linear feet _____ width (ft), or _____ acres.

☐ Wetlands adjacent to TNWs: _____ acres.

2. RPWs that flow directly or indirectly into TNWs.

☒ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide rationale indicating that tributary flows perennial: Water flowing during 2 July 2007 site visit.

☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: _____.

Provide estimates for jurisdictional waters in the review area (check all that apply):

☒ Tributary waters: **2,400** linear feet **7** width (ft).

☐ Other non-wetland waters: _____ acres.

Identify type(s) of waters: _____.

3. Non-RPWs[8] that flow directly or indirectly into TNWs.

☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

☐ Tributary waters: _____ linear feet _____ width (ft).

☐ Other non-wetland waters: _____ acres.

Identify type(s) of waters: _____.

[8]See Footnote # 3.

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
   ☒ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
      ☒ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: Wetlands 2.81R, 2.9L, and 3.0R each abut one of the three streams in the project area; 4.2R abuts a ditch which is an RPW

      ☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: _____

   Provide acreage estimates for jurisdictional wetlands in the review area: **1.16** acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
   ☒ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C. Wetlands 2.6R, 2.82R, 2.7R, 2.81L

   Provide acreage estimates for jurisdictional wetlands in the review area: **0.83** acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
   ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional wetlands in the review area: _____ acres.

7. **Impoundments of jurisdictional waters.**[9]
   As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
   ☐ Demonstrate that impoundment was created from "waters of the U.S.," or
   ☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
   ☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]
☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: _____.
☐ Other factors. Explain: _____.

Identify water body and summarize rationale supporting determination: _____

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: _____ linear feet _____ width (ft).
☐ Other non-wetland waters: ____ acres.
   Identify type(s) of waters: _____.
☐ Wetlands: ____ acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):
☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
   ☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: _____.
☐ Other: (explain, if not covered above): _____.

[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[10] Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.*

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams): _____ linear feet _____ width (ft).
- ☐ Lakes/ponds: _____ acres.
- ☐ Other non-wetland waters: _____ acres. List type of aquatic resource: _____.
- ☐ Wetlands: _____ acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams): _____ linear feet _____ width (ft).
- ☐ Lakes/ponds: _____ acres.
- ☐ Other non-wetland waters: _____ acres. List type of aquatic resource: _____.
- ☐ Wetlands: _____ acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: _____.
- ☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - ☒ Office concurs with data sheets/delineation report.
  - ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps: _____.
- ☐ Corps navigable waters' study: _____.
- ☐ U.S. Geological Survey Hydrologic Atlas: _____.
  - ☐ USGS NHD data.
  - ☐ USGS 8 and 12 digit HUC maps.
- ☐ U.S. Geological Survey map(s). Cite scale & quad name: _____
- ☐ USDA Natural Resources Conservation Service Soil Survey. Citation: _____.
- ☐ National wetlands inventory map(s). Cite name: _____.
- ☐ State/Local wetland inventory map(s): _____
- ☐ FEMA/FIRM maps: _____.
- ☐ 100-year Floodplain Elevation is: _____ (National Geodectic Vertical Datum of 1929)
- ☐ Photographs: ☐ Aerial (Name & Date): _____
  or ☐ Other (Name & Date): _____.
- ☐ Previous determination(s). File no. and date of response letter: _____.
- ☐ Applicable/supporting case law: _____.
- ☐ Applicable/supporting scientific literature: _____.
- ☐ Other information (please specify): _____.

B. ADDITIONAL COMMENTS TO SUPPORT JD: _____.